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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,254	06/19/2003	Myron J. Block	ORR-143	6696
959	7590	12/10/2004	EXAMINER	
LAHIVE & COCKFIELD, LLP.			STAFIRA, MICHAEL PATRICK	
28 STATE STREET				
BOSTON, MA 02109			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/601,254	BLOCK, MYRON J.
	Examiner	Art Unit
	Michael P. Stafira	2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15, 17-30 and 32 is/are rejected.
- 7) Claim(s) 16 and 31 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 5/27/04.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

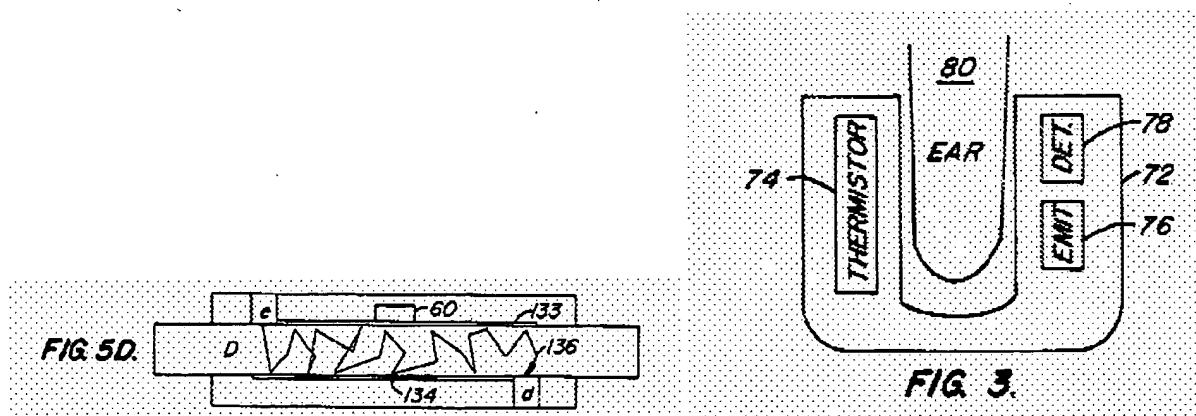
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Chin et al. ('223).

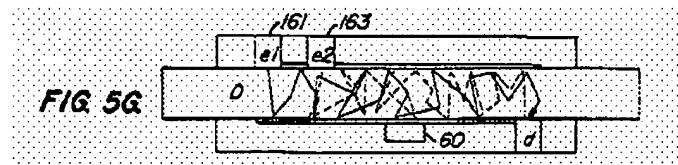
#### **Claim 1**

Chin et al. ('223) discloses providing a source of illuminating radiation (Fig. 5D, Ref. e) for illuminating a sample (Fig. 3, Ref. 80); arranging said illumination source (Fig. 5D, Ref. e) adjacent to a reflective enclosure (Fig. 5d, Ref. 133) that at least partially encloses said sample (See Fig. 3); illuminating said sample with radiation from said illumination source (Fig. 5D, Ref. 136); and detecting radiation emerging from said sample with a detector (Fig. 5D, Ref. d).



#### **Claim 2**

Chin et al. ('223) discloses the source of illuminating radiation comprises a plurality of radiation sources (Fig. 5G, Ref. 161, 163).



### **Claim 3**

Chin et al. ('223) further discloses at least one of said plurality of radiation sources is located within said reflective enclosure (See Fig. 5D).

### **Claim 4**

The reference of Chin et al. ('223) further discloses at least two of said radiation sources are located within said reflective enclosure and said radiation sources are located radially relative to said sample (See Fig. 5G).

### **Claim 12**

Chin et al. ('223) discloses the sample contains a bodily fluid (Fig. 3, Ref. 80).

### **Claim 13**

Chin et al. ('223) further discloses the testing apparatus is adapted for in vivo non-invasive testing of a material carried in said bodily fluid (See Fig. 3).

### **Claim 14**

The reference of Chin et al. ('223) further discloses the sample is a finger that is illuminated and from which said radiation is detected (Col. 5, lines 54-56).

### **Claim 15**

Chin et al. ('223) further discloses the reflective enclosure only partially encloses said finger in a radial direction, with an opening approximately equal in size to the width of said finger (Col. 6, lines 59-63).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Seeker ('784).

**Claim 5**

Chin et al. ('223) discloses at least two radiation sources are located within the reflective enclosure (See Fig. 5G; Ref. 161, 163)

Chin et al. ('223) substantially teaches the claimed invention except that it does not show an at least two radiation sources axially relative to the sample. Seeker ('784) shows that it is known to provide two radiation sources (Fig. 1, Ref. 7, 9) axially relative to the sample (See Fig. 1) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the radiation sensors axially relative to the sample of Seeker ('784) for the purpose of providing a uniform illumination over the sample, therefore increasing the sensitivity of the measurement.

**Claim 6**

Chin et al. ('223) discloses the claimed invention except for the sources are miniature incandescent lamps. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Chin et al. ('223) with the miniature incandescent lamps since it was well known in the art that the using incandescent lamps use a variety of wavelengths, therefore increasing the sensitivity of the measurement.

**Claim 7**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the detector is a plurality of detector units. Seeker ('784) shows that it is known to provide a plurality of detector units (Fig. 2, Ref. 19, 23) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the plurality of detectors of Seeker ('784) for the purpose of providing multiple detection systems over a wider area, therefore allowing for a more complete measurement of an area in less time.

5. Claims 8-11,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Branigan et al. ('717).

**Claim 8**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the enclosure is a cylinder open at both ends. Branigan et al. ('717) shows that it is known to provide a cylinder open at both ends (See Fig. 3) for an oxygen saturation measurement apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder opening of Branigan et al. ('717) for the purpose of providing a sample to be placed at either end of the sensor, therefore making the ends universal.

**Claim 9**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the cylinder encloses the sample. Branigan et al. ('717) shows that it is known to provide a cylinder to enclose the sample (See Fig. 8) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder enclosure of Branigan et al. ('717) for the purpose of providing a uniform holder for the optical sources and detector, therefore providing the same distance to the optical elements and decreasing the amount of time needed for calculations.

**Claim 10**

Chin et al. ('223) further discloses the sample is a fluid (See Fig. 3).

**Claim 11**

The reference of Chin et al. ('223) further discloses the fluid flows through said cylinder during time of illumination and detection of radiation (See Fig. 3).

**Claim 17**

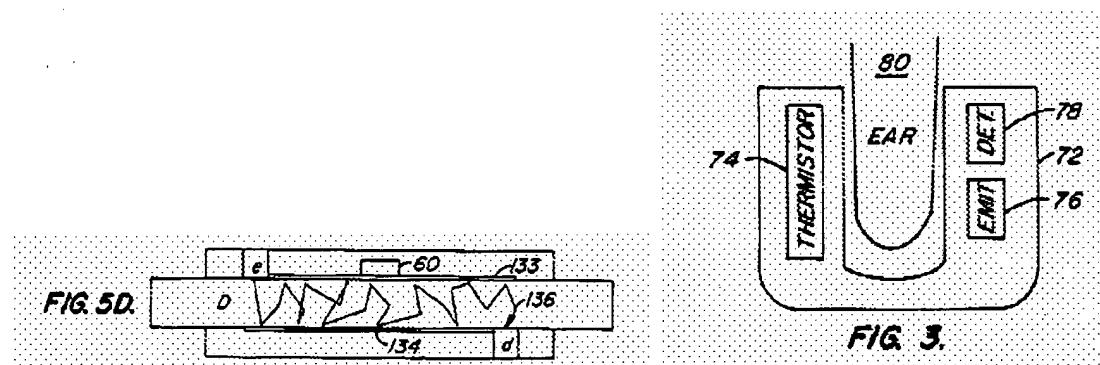
Chin et al. ('223) substantially teaches the claimed invention except that it does not show that the portion of the finger that is illuminated and from which the radiation is detected is a knuckle. Branigan et al. ('717) shows that it is known to provide illumination of the knuckle (See Fig. 9) for an oxygen saturation sensor apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the illumination of the knuckle of Branigan et al. ('717) for the purpose of providing illumination over different parts of the finger, therefore receiving different illumination sensitivity from different areas which give a more uniform measurement.

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6. Claims 18-21, 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chin et al. ('223).

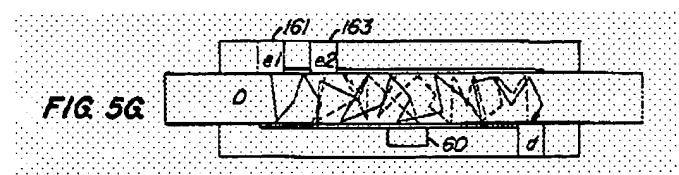
### Claim 18

Chin et al. ('223) discloses a source (Fig. 5D, Ref. e) of illuminating radiation for illuminating a sample (Fig. 3, Ref. 80), said illumination source (Fig. 5D, Ref. e) being arranged adjacent to a reflective enclosure (Fig. 5D, Ref. 133) that at least partially encloses said sample (See Fig. 3); and a detector (Fig. 5D, Ref. d) for detecting radiation emerging from said sample (See Fig. 3).



### Claim 19

Chin et al. ('223) discloses the source of illuminating radiation comprises a plurality of radiation sources (Fig. 5G, Ref. 161, 163).



### Claim 20

Chin et al. ('223) further discloses at least one of said plurality of radiation sources is located within said reflective enclosure (See Fig. 5D).

**Claim 21**

The reference of Chin et al. ('223) further discloses at least two of said radiation sources are located within said reflective enclosure and said radiation sources are located radially relative to said sample (See Fig. 5G).

**Claim 27**

Chin et al. ('223) discloses the sample contained in a fluid (Fig. 3, Ref. 80).

**Claim 28**

Chin et al. ('223) further discloses the testing apparatus is adapted for in vivo non-invasive testing of a material carried in said bodily fluid (See Fig. 3).

**Claim 29**

The reference of Chin et al. ('223) further discloses the reflective enclosure (Fig. 5d, Ref. 133) is designed to partially enclose a finger (Col. 5, lines 54-57).

**Claim 30**

Chin et al. ('223) further discloses the reflective enclosure only partially encloses said finger in a radial direction, with an opening approximately equal in size to the width of said finger (Col. 6, lines 59-63).

7. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Seeker ('784).

**Claim 22**

Chin et al. ('223) discloses at least two radiation sources are located within the reflective enclosure (See Fig. 5G; Ref. 161, 163)

Chin et al. ('223) substantially teaches the claimed invention except that it does not show an at least two radiation sources axially relative to the sample. Seeker ('784) shows that it is known to provide two radiation sources (Fig. 1, Ref. 7, 9) axially relative to the sample (See Fig. 1) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the radiation sensors axially relative to the sample of Seeker ('784) for the purpose of providing a uniform illumination over the sample, therefore increasing the sensitivity of the measurement.

**Claim 23**

Chin et al. ('223) discloses the claimed invention except for the sources are miniature incandescent lamps. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Chin et al. ('223) with the miniature incandescent lamps since it was well known in the art that the using incandescent lamps use a variety of wavelengths, therefore increasing the sensitivity of the measurement.

**Claim 24**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the detector is a plurality of detector units. Seeker ('784) shows that it is known to provide a plurality of detector units (Fig. 2, Ref. 19, 23) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the plurality of detectors of Seeker ('784) for the purpose of providing multiple detection systems over a wider area, therefore allowing for a more complete measurement of an area in less time.

8. Claims 25-26, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Branigan et al. ('717).

**Claim 25**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the enclosure is a cylinder open at both ends. Branigan et al. ('717) shows that it is known to provide a cylinder open at both ends (See Fig. 3) for an oxygen saturation measurement apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder opening of Branigan et al. ('717) for the purpose of providing a sample to be placed at either end of the sensor, therefore making the ends universal.

**Claim 26**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the cylinder encloses the sample. Branigan et al. ('717) shows that it is known to provide a cylinder to enclose the sample (See Fig. 8) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder enclosure of Branigan et al. ('717) for the purpose of providing a uniform holder for the optical sources and detector, therefore providing the same distance to the optical elements and decreasing the amount of time needed for calculations..

**Claim 32**

Chin et al. ('223) substantially teaches the claimed invention except that it does not show that the portion of the finger that is illuminated and from which the radiation is detected is a knuckle. Branigan et al. ('717) shows that it is known to provide illumination of the knuckle (See Fig. 9) for an oxygen saturation sensor apparatus. It would have been obvious to combine the

device of Chin et al. ('223) with the illumination of the knuckle of Branigan et al. ('717) for the purpose of providing illumination over different parts of the finger, therefore receiving different illumination sensitivity from different areas which give a more uniform measurement.

***Allowable Subject Matter***

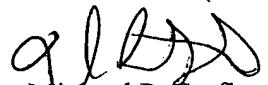
9. Claims 16, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430.

The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Stafira  
Primary Examiner  
Art Unit 2877

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